Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES F. RICHARDS

Appeal No. 95-0813
Application 07/894,654[1]

ON BRIEF

Before LYDDANE, GARRIS and FRANKFORT, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 2, 3, 6, 7, 10, 12 through 16, 18, 23 and 24, all of the claims remaining in this application. Claims 1, 4, 5, 8, 9, 11, 17 and 19 through 22 have been canceled.

[1] Application for patent filed June 5, 1992.

Appellant's invention relates to a method of treating a continuous steel rod (e.g., a steel wire) prior to subjecting the rod to a drawing operation. More particularly, the method addresses applying a coating to the rod which facilitates the size reduction of the rod by drawing. Claim 2 is representative of the subject matter on appeal and a copy of that claim, as it appears in the Appendix to appellant's brief, is attached to this decision.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Prust	2,859,146	Nov. 4, 1958
Brekle	3,886,894	Jun. 3, 1975

Claims 2, 3, 6, 7, 10, 12 through 16, 18, 23 and 24 stand rejected under 35 U.S.C. 112, first and second paragraphs, "as the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." According to the examiner,

> "[i]n claim 2, the step of removing iron oxide and steel particles is not understood because there is no introduction of these materials to the bath.
>
> [i]t is unclear if the instant claim 2 reads on a process where the claimed invention is duplicated except for the step of removing iron oxide and steel particles from the tank because no iron or steel oxide particles are present in the tank and thus cannot be removed.
>
> [t]his example illustrates the problem with the current claim language, which is unclear as to what is required when no iron or steel particles are in the tank." (Answer, pages 3-4)

Claims 2, 3, 6, 7, 10, 12 through 16, 18, 23 and 24 additionally stand rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellant regards as the invention. In the examiner's view (answer, page 4),

> "[i]n claims 2 and 6, use of the word 'preheating' is indefinite because said term is used to refer to heating the rod before and during application of the coating.
>
> [i]n line 4 of claim 7, 'said liquid' is indefinite as lacking antecedent basis."

In addition to the foregoing rejections, the appealed claims 2, 3, 6, 7, 10, 12 through 16[2], 18, 23 and 24 also stand rejected under 35 U.S.C. §103 as being unpatentable over Brekle in view of Prust.

Rather than reiterate the examiner's full explanation of the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellant regarding those rejections, we make reference to the examiner's answer (Paper No. 14, mailed July 27, 1994) for the examiner's complete reasoning in support of the rejections, and to appellant's brief (Paper No. 13, filed July 18, 1994) for appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by appellant and the examiner. As a consequence of our

[2] While the examiner has listed claim 17 as being subject to the rejection under §103 (answer, page 4), we note that claim 17 was canceled in the amendment filed January 18, 1994 (Paper No. 7). We assume for purposes of this appeal that it was merely a typographical error that claim 17 was listed and not claim 16. Accordingly, we consider that it was pending claim 16 which the examiner intended to include in the rejection.

review, we find that we are unable to sustain any of the rejections posited by the examiner. Our reasons for this determination follow.

Looking first to the examiner's rejection of the appealed claims under 35 U.S.C. 112, first and second paragraphs, we understand this rejection to be based on lack of enablement and/or on the examiner's determination that the claims are indefinite. The first paragraph of 35 U.S.C. 112 requires, inter alia, that the specification of a patent enable any person skilled in the art to which it pertains to make and use the claimed invention. Although the statute does not say so, enablement requires that the specification teach those in the art to make and use the invention without "undue experimentation." In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). That some experimentation may be required is not fatal; the issue is whether the amount of experimentation required is "undue." Id. at 736-37, 8 USPQ2d at 1404.

In this particular instance, after considering appellant's disclosure as a whole and reviewing the claims in light of the specification (In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983)), we must agree with appellant's assessment on pages 7 and 8 of the brief that the claimed invention is enabled by the application disclosure and that the claims reasonably apprise those skilled in the art of the metes and bounds of the claimed subject

matter. One skilled in the art viewing appellant's specification would easily recognize that the excess liquid from the coating applicators (44, 46) returning to the tank (48) for reuse (specification, page 5, lines 1-4) would carry some iron oxide and steel particles from the rod (12) into the tank and thereby provide a source of contamination for the coating liquid contained therein. As explained on page 6 of the specification, this contamination can build up quickly and make it difficult to dry the liquid on the rod and also leave a residue on the drawn steel wire which reduces the wire's resistance to electrolytic corrosion. Thus, appellant has provided for removal of the contaminants from the liquid in the tank by filtration or magnetic separation. Appellant further notes (page 6, lines 28-31) that this removal of the contaminants takes place "continuously" and that with the resulting clean liquid, the rod is coated more uniformly, is more easily dried, and has an increased shelf life after being drawn to its finished size.

Given the above understanding from appellant's disclosure, we are at a loss to understand the examiner's position that one skilled in the art would be unable to use appellant's claimed method. We see no basis for this conclusion. As for the examiner's concern with regard to whether claim 2 on appeal reads on

> "a process where the claimed invention is duplicated except for the step of removing iron oxide and steel particles from the tank because no iron or steel oxide particle are present in the tank and thus cannot be removed,"

we agree with appellant (brief, page 8) that claim 2 does not and could not read on such a process. Accordingly, the examiner's rejection of claims 2, 3, 6, 7, 10, 12 through 16, 18, 23 and 24 under 35 U.S.C. 112, first and second paragraphs, will not be sustained.

Turning next to the examiner's additional rejection of claims 2, 3, 6, 7, 10, 12 through 16, 18, 23 and 24 under 35 U.S.C. 112, second paragraph, we are in complete agreement with appellant's arguments as found on pages 8 and 9 of the brief. Unlike the examiner, we consider that the scope of the subject matter embraced by appellant's claims on appeal is reasonably clear and definite, and fulfills the requirements of 35 U.S.C. 112, second paragraph. When the questioned language of claims 2 and 6 is read in light of appellant's specification as it would be interpreted by one of ordinary skill in the art, it is clear that appellant's use of the terminology "preheating" in the claims is correct, notwithstanding the fact that an earlier preheated portion of the continuous rod (12), which has now moved to the coating means (18), is being coated

with the liquid borax solution at the same time that a following portion of the continuous rod is being preheated at the preheating means (16). As for the recitation of "said liquid" in claim 7, line 4, like appellant, we understand this language to refer back to the "liquid borax solution" of claim 2 and have so interpreted the claim for purposes of this appeal. We have no doubt that one of ordinary skill in the art would understand appellant's claim 7 in this same manner given the differentiation in claim 7, lines 4-7, between the recitations involving "said liquid" and "said liquid film." Accordingly, we will not sustain the examiner's additional rejection of appellant's claims 2, 3, 6, 7, 10, 12 through 16, 18, 23 and 24 under 35 U.S.C. 112, second paragraph.

We next look to the examiner's prior art rejection of appealed claims 2, 3, 6, 7, 10, 12 through 16, 18, 23 and 24 under 35 U.S.C. 103 based the collective teachings of Brekle and Prust. For at least the reasons set forth on pages 12 and 13 of appellant's brief, we conclude that it would not have been obvious to one of ordinary skill in the art to combine the teachings of Brekle and Prust in the manner urged by the examiner. We agree with appellant that it would make no sense to combine the dipping in molten zinc of the galvanizing process of Prust and the apparatus and process in Brekle wherein the rod is being cleaned and coated prior to a drawing operation which will reduce the cross sectional area of the rod.

Moreover, we agree with appellant that the references relied upon by the examiner entirely fail to disclose or suggest preheating of a rod such that a subsequently applied liquid film

> "is dried by residual heat from said rod, such that a dried coating is formed on said continuous rod from said liquid film, said coating facilitating size reduction of said rod by drawing,"

as required in claim 2 on appeal. In addition, we find that the examiner's reading of the last clause of appellant's claim 2 is unduly restrictive because it improperly narrows the meaning of the claim beyond that which is clearly intended by appellant as set forth in the specification. See In re Sneed, 710 F.2d at 1548, 218 USPQ at 388. As argued in appellant's brief, page 11, in both Brekle and Prust, the rod is handled by other equipment subsequent to the application of the liquid solution to the rod and before substantial drying of the liquid film has occurred. Such handling of the rod is precluded by appellant's claim 2 when the language thereof is properly construed in light of appellant's specification as it would be interpreted by one of ordinary skill in the art.

For the foregoing reasons, we will not sustain the examiner's rejection of appellant's independent claim 2 under 35 U.S.C. 103 based on the combined teachings of Brekle and Prust. Since

claims 3, 6, 7, 10, 12 through 16, 18, 23 and 24 depend either directly or indirectly from independent claim 2 and include the limitations thereof, it follows that we will also not sustain the §103 rejection of these claims based on the applied references.

To summarize our position, we note that the examiner's rejections of appealed claims 2, 3, 6, 7, 10, 12 through 16, 18, 23 and 24 under 35 U.S.C. 112, first paragraph, and under 35 U.S.C. 112, second paragraph, have been reversed. The examiner's rejection of the appealed claims under 35 U.S.C. 103 relying on Brekle and Prust has also been reversed.

REVERSED

WILLIAM E. LYDDANE)
Administrative Patent Judge)
)
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BRADLEY R. GARRIS) BOARD OF PATENT
Administrative Patent Judge) APPEALS
) AND
) INTERFERENCES
CHARLES E. FRANKFORT)
Administrative Patent Judge)

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APPENDIX

2. A method of treating a continuous steel rod, said method comprising the steps of:

providing a tank containing a liquid borax solution;

continuously moving said steel rod relative to said tank;

during said step of continuously moving said rod relative to said tank, continuously applying said liquid borax solution to said continuous rod, and thereby forming a liquid film on said continuous rod; and

during said step of continuously moving said rod relative to said tank and prior to said step of applying said liquid borax solution to said rod, preheating said rod such that said liquid film is dried by residual heat from said rod, such that a dried coating is formed on said continuous rod from said liquid film, said coating facilitating size reduction of said rod by drawing; and

during said step of applying said liquid borax solution to said continuous rod, substantially continuously removing iron oxide and steel particles from said tank, and thereby conditioning said liquid borax solution; and

wherein said continuous rod is not handled, subsequent to the application of said liquid borax solution, until substantial drying of said liquid film occurs, to maintain the uniformity of said dried coating.